December 1966

Brief 66-10669

NASA TECH BRIEF

Gas Leak Detector is Simple and Inexpensive

The problem:

To devise a simple, inexpensive system to continuously monitor for small gas leaks in piping or pressure vessels that are remotely located or located in an environment that is hazardous to personnel. Previous methods have required either continuous monitoring by personnel or expensive instruments and systems or both.

The solution:

A combination of a paper ribbon and adhesive plastic tape is used to cover the area to be monitored and a pressure sensor is placed over a hole in the tape and paper. The pressure sensor consists of an upper and a lower diaphragm, protective covers, and adhesive-faced spacers to hold the components in place. Leaks move under the paper and tape and reach the sensor, which is actuated by the rise in pressure beneath it. The sensor response causes an audible and/or visual indication at a central control point remote from the detector location.

Notes:

1. This system is advantageous because of its inexpensive and simple construction and because it lends itself to monitoring any gas regardless of its nature.
2. Inquiries concerning this innovation may be directed to:

   Technology Utilization Officer
   Marshall Space Flight Center
   Huntsville, Alabama 35812
   Reference: B66-10669

Patent status:

No patent action is contemplated by NASA.

Source: D. K. Mitchell
of the Boeing Company
under contract to
Marshall Space Flight Center
(M-FS-1206)

Category 01